

US EPA ARCHIVE DOCUMENT

DATA EVALUATION RECORD

- 1. Chemical: NAA Acetamide
- 2. Test Material: Technical 1- Naphthaleneacetamide, Lot No. 1K1403, Assay: 96.4%.
- 3. Study Type: 71-2. Avian Dietary LC<sub>50</sub> Test. Species tested, Northern Bobwhite (Colinus virginianus).
- 4. Citation: Campbell, S.M. and M. Jaber 1992. Technical 1- Naphthaleneacetamide, a dietary LC<sub>50</sub> study with the Northern Bobwhite. Project No. 246-108. Prepared by Wildlife International Ltd., Easton, MD. Sponsered by Amvac Chemical Corp. Los Angeles, CA. EPA MRID No. 425842-01.
- 5. Reviewed by: Joseph Sylvester  
Fishery Biologist  
EEB/EFED  
Signature: *Joseph Sylvester*  
Date: *11/4/93*
- 6. Approved by: Ann Stavola  
Supervisory  
Fishery Biologist  
EEB/EFED  
Signature: *Ann Stavola*  
Date: *11/1/93*
- 7. Conclusions: This study is scientifically sound and meets the guideline requirements for an Avian Dietary LC<sub>50</sub> test using the Northern Bobwhite. The dietary LC<sub>50</sub> for Northern Bobwhite exposed to Technical 1- Naphthaleneacetamide was greater than 5620 ppm. Based on reduction in body weight, the NOEC was 1780 ppm. *The chemical is practically nontoxic to upland gamebirds.*
- 8. Recommendations: N/A
- 9. Background:
- 10. Discussion of Individual Tests: N/A
- 11. Materials and Methods:

A. Test Animals: Northern Bobwhite (Colinus virginianus) 10 days of age were obtained from the Wildlife International Ltd. avian toxicity facility in Easton, MD. Birds in good health and from the same hatch were used in the tests. All birds were pen reared and were phenotypically similar to wild birds. Ten birds were randomly assigned to five treatment groups and three

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control groups.

B. Test System: Treatment groups of Bobwhite chicks were exposed to nominal dietary concentrations of 562, 1000, 1780, 3160 and 5620 ppm. Each treatment and control group was fed for the five test days. Control animals received an amount of carrier in their diet equal to the greatest amount in treated diets. During the three day post exposure period, all birds were given untreated feed. Birds were acclimated for 10 days before testing. Exposure to test conditions was five days and the post exposure observation period was three days.

C. Animal Diet/Facilities: Birds were fed a formulated game bird ration during acclimation and testing periods. Chicks were also given a water soluble vitamin supplement until initiation of tests. Water was provided ad libitum throughout acclimation and test periods. The carrier used in the tests was 2% corn oil in treatment and control diets. Treatment diets were prepared by mixing the test substance into the diet with corn oil. Dietary concentrations were not adjusted for purity of test substance. Diet samples were tested and analyzed for homogeneity of test substance and stability. Pen facilities conformed to recommended protocols. Average temperature of the pens was 36 C. Relative humidity outside the brooder averaged 72%. Birds were exposed to 16 hours light during acclimation and testing.

D. Observations: All birds were observed daily. Records were kept of all mortality, signs of toxicity and abnormal behavior. Body weights were measured at the beginning and end of testing, and on day 5 during the tests. Feed consumption was estimated by measuring the change in feed weight presented to the birds over a period of time.

12. Reported Results: Results of studies conducted to determine homogeneity, concentration, and stability of the test substance in the diet indicated that the test substance was uniformly distributed in treatment diets. One incidental mortality occurred in one control group. All other birds in the controls appeared normal. There were no mortalities or overt signs of toxicity in any birds in all five treatment groups ( 562-5620ppm). Compared with controls, Birds in treatment groups 3160 and 5620 ppm showed reduced weight gain during the test period. The report concluded that the dietary LC<sub>50</sub> value for Northern Bobwhite exposed to NAA Acetamide was greater than 5620 ppm. Based on the reduction in body weight, the NOEC was determined to be 1780 ppm. Statistical analysis was not used to calculate LC<sub>50</sub>. Estimation of this value was made by visual inspection of the mortality data. 2

13. Quality Assurance Measures: Quality assurance and good laboratory practice statements were included in the report. The report also included the dates of all recent audits and the dates the results of the audits were reported to the Study Director.
14. Reviewers Discussion and Interpretation of Study Results:
- A. Test Procedure: The test procedures were generally in accordance with protocols recommended by the SEP or ASTM.
  - B. Statistical Analysis: It is desirable to design the dietary study to establish an actual  $LC_{50}$ . However, this study demonstrated that the  $LC_{50}$  is greater than 5,000 ppm for the acute toxicity level for Bobwhite.
  - C. Discussion/Results: This study is scientifically sound and meets the guideline requirements for an Avian Dietary  $LC_{50}$  test using the Northern Bobwhite. The dietary  $LC_{50}$  for Northern Bobwhite exposed to Technical 1-Naphthalene-acetamide was greater than 5620 ppm. Based on reduction in body weight, the NOEC was determined to be 1780 ppm.
  - D. Adequacy of the Study:
    - 1. Classification : Core
    - 2. Rational: N/A
    - 3. Repairability: N/A
15. Completion of One-Liner for Study: